

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave. St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018481**Date Inspected:** 02-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** John Pagliero**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

1) At weld joint 6E/7E – D1, inside the OBG section: ABF welding personnel Fred Kaddu (#2188) was performing repair welding using the Shielded Metal Arc Welding (SMAW) process. QC Inspector Jesus Cayabyab was monitoring the work.

2) At weld joint 6E/7E – B, inside the OBG section: ABF welding personnel Jorge Lopez (#6149) was performing repair welding using the SMAW process. QC Inspector Jesus Cayabyab was monitoring the work.

3) At weld joint 6E/7E – LS-5, inside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was performing production welding using the SMAW process. QC Inspector John Pagliero was monitoring the work.

4) At weld joint 7E/8E – LS-4, inside the OBG section: ABF welding personnel Hua Qiang Hwang (#2930) was performing production welding using the SMAW process. QC Inspector John Pagliero was monitoring the work.

5) At weld joint 8E/9E – C-1 & 2 and E-1 & 2, outside the OBG section this QA Inspector observed ABF has fit up a steel backing bar covered with a copper bar. See below for details and photos.

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6) At weld joint 7E/8E – C-1 & 2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) are setting up the Flux Cored Arc Welding (FCAW) track welding equipment.

At weld joint 6E/7E – D1, inside the OBG section this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) performing repair welding using the SMAW process. This QA Inspector observed the repair had been started the previous day and observing the majority fill and all the cover passes were performed this date. QC Inspector Jesus Cayabyab informed this QA Inspector this was the first repair cycle (R-1) and the original excavation was located at Y-630 and was 200 mm long, 25 mm wide and 10 mm deep. This QA Inspector observed QC Inspector Jesus Cayabyab verify the following welding parameters: 119 amperes using a 3.2 mm diameter E7018H4R electrode. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repair.

At weld joint 6E/7E – B, inside the OBG section this QA Inspector observed ABF welding personnel Jorge Lopez (#6149) excavating a repair area using a grinder. Prior to performing the repair welding using the SMAW process this QA Inspector observed the excavation was located at Y-30 and was 200 mm long, 38 mm wide and 11 mm deep. QC Inspector Jesus Cayabyab informed this QA Inspector he had performed and accepted both a visual and Magnetic Particle Testing (MT) on the excavation prior to welding. This QA Inspector performed a random verification of the welding parameters observing the following: 123 amperes using a 3.2 mm diameter E7018H4R electrode. QC Inspector Jesus Cayabyab was monitoring the work at this location. The welding observed appeared to comply with ABF-WPS-D15-1002 Repair.

At weld joint 6E/7E – LS-5, inside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) performing production welding using the SMAW process. This QA Inspector observed the electric ceramic blankets were being used to provide preheat. This QA Inspector used a temperature indicating marker to confirm the preheat temperature was greater than 100° C. This QA Inspector observed QC Inspector John Pagliero verify the following welding parameters: 121 amperes using a 3.2 mm diameter E9018H4R electrode. This QA Inspector observed the electrode storage container adjacent to the work station was on and indicated the internal temperature was greater than 250° F. The welding observed by this QA Inspector appeared to comply with ABF-WPS-D15-1012-3.

At weld joint 7E/8E – LS-4, inside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) performing production welding using the SMAW process. This QA Inspector observed the electric ceramic blankets were being used to provide preheat. This QA Inspector used a temperature indicating marker to confirm the preheat temperature was greater than 100° C. This QA Inspector observed QC Inspector John Pagliero verify the following welding parameters: 123 amperes using a 3.2 mm diameter E9018H4R electrode. This QA Inspector observed the electrode storage container adjacent to the work station was on and indicated the internal temperature was greater than 250° F. The welding observed by this QA Inspector appeared to comply with ABF-WPS-D15-1012-3.

At weld joint 8E/9E – C-1 & 2 and E-1 & 2, outside the OBG section this QA Inspector observed ABF personnel have fit up a 9 mm (3/8-inch) steel backing bar which is covered with a 12 mm (1/2-inch) copper bar. See photos below.

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At weld joint 7E/8E – C-1 & 2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) setting up the Flux Cored Arc Welding (FCAW) track welding equipment in preparation to begin production welding. Welding at this location was not observed by this QA Inspector this date.

Summary of Conversations:

As noted above.



Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
